BC CREEK PROTECTION SOCIETY
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To:
California Air Resources Board
1001 I St.
Sacramento, CA

Re: RES Concept Outline

To whom it may concern:

Please find below comments and concerns the British Columbia Creek Protection Society (BCCPS) has about the Renewable Electricity Standard concept outline. BCCPS is a non-governmental organization based in British Columbia, Canada. BCCPS objectives are to protect free flowing natural watercourses in Canada, particularly British Columbia (BC), as part of ecologically unique systems of societal significance, to provide public education about natural watercourses and their importance to the environment and society, and to raise awareness of current issues concerning said watercourses.

BCCPS is currently collaborating with several Canadian and US organizations due to the increasing pressure rivers and creeks in BC are facing from proposed hydroelectric development. Our organization has substantial concerns that changes to the California RSP standard will result in significantly increased hydroelectric development pressure on BC rivers and creeks. Therefore, we would like to comment on the ARB document "Proposed Concept Outline for the California Renewable Electricity Standard".

Part II Section 2.c: Geographic Eligibility
As an out of state organization with extensive insight in the BC electric energy system, we are deeply concerned about this point. We believe that there should be no changes to the current definition of RPS-eligible resources. In particular, the current language regarding hydroelectric power must be maintained unchanged to avoid far reaching environmental degradation in BC due to increased hydroelectric development. It is beyond doubt that changing the RPS language regarding hydroelectric facilities would result in a large increase in industrial development of free flowing rivers in BC. A change would clearly mean weakening current CA law and damage the strong track record that CA currently shows with regard to environmental protection.

Unfortunately, BC has a poor framework for assessing environmental impacts, including those on species at risk. The BC Environmental Assessment Act has been extensively criticized by many non-governmental organizations as well as many scientists. Further, PG&E's June 20, 2008 "BC Renewable Study Phase 1" report submitted to the CPUC concluded:

- 'BC ROR (run-of-river) hydro facilities would not be qualified as RPS eligible resources" in CA.

(page 7)

- "BC ROR hydro facilities would not meet any of these criteria," i.e. CA regulations. (page 8)

We therefore see no need for a study to determine if hydroelectric power from BC should be RPS-eligible.

To give a better context for the situation in BC, please consider the following: Our organization has significant concerns about the rapid development of RoR projects across BC. As of 2008, BC Hydro had signed 89 energy purchase agreements with independent power producers accounting for 14,860 GWh per year compared to 2000 GWh per year in 2001 (a growth of approximately 33% per year). A further 5000 GWh are expected to be added by the end of this year. The speed and scale of this development is unprecedented and the knowledge about the potential environmental and societal impacts is minimal. Currently, there are more than 600 water license applications for power generation across BC and many of these sites will be developed in the near future at current growth rates. The past growth raises extensive concerns about the environmental sustainability of RoR energy projects in BC since the precautionary principle is entirely ignored by government and proponents.

The current development is poorly regulated by the BC government and the potential environmental impacts are not sufficiently assessed. In particular, cumulative impacts are not properly considered in both the provincial and federal assessments. BCCPS objects to larger and larger scale projects being rapidly approved even though substantial scientific and public concerns exist. Many large projects (>100 MW) are clusters of many small (<30 MW) hydroelectric facilities, resulting in difficult to predict environmental impacts due to the extremely poor understanding of cumulative impacts. Potential damages include loss of anadromous and resident fish stocks, water quality degradation, change of sediment regimes, thousands of kilometers of new transmission lines resulting in habitat fragmentation for terrestrial species and overall reduced ecosystem resilience to environmental stresses such as global warming.

Unfortunately, BC environmental law has extensive weaknesses, including the lack of adequate consideration of species at risk, when considering large numbers of these energy projects. Species at risk are being impacted by many of the proposed developments. There are currently no mitigation strategies known to lower the impact of power projects on many species. Leading ecologists are particularly concerned about blue-listed (includes any ecological community, and indigenous species and subspecies considered to be of special concern in British Columbia) grizzly bears and red-listed (includes any ecological community, and indigenous species and subspecies that is extirpated, endangered, or threatened in British Columbia) marbled murrelets (a sea bird that nests in old growth forest along the BC coast) that are at immediate risk due to transmission-line developments for RoR projects. There are particular concerns for projects that are smaller than 50 MW. Projects smaller than 50 MW do not have to obtain an environmental assessment certificate under the BC Environmental Assessment Act. Hence, public consultations are marginalized and the cumulative environmental impacts are not assessed for small projects. Further, BC Hydro has issued a standing offer program for projects smaller than 10 MW that will allow any independent power producer to sell power from these small projects to BC Hydro with minimal environmental standards. Often, up to 95% of the median annual instream flow is diverted for power generation, leaving severe concerns about cumulative impacts of many small projects, in particular with regard to resident fish habitat. The assessment process is also highly political and the final decision is made by the Minister of Environment and the Minister of Energy and Mines, rather than an independent body that could make decisions based on the

actual scientific findings of the assessment. Only a small fraction of all proposed projects (e.g., greater than 200 MW nameplate capacity) must also be assessed by the federal Canadian Environmental Assessment Agency.

The common claim that projects are typically located on non-fish bearing streams or above natural barriers to migrating species is not true. As an example, the Bute Inlet project currently under review consists of 17 individual projects all around 30 to 100 MW is size. All of these diversion reaches,hold resident populations of trout and have significant fish value, and the streams are considered world-class destinations by fishermen.

Due to the lack of regional planning and weak provincial environmental law, BC's environmental groups are opposed to the rapid and widespread development of RoR power projects. In fact, many environmental groups, the Union of BC Municipalities as well as several regional districts and the Union of BC Indian Chiefs have called for a moratorium on RoR development in BC until proper regional planning is implemented and environmental law is substantially improved. For example, a bill passed in 2006 (Bill 30) took away all rezoning power from local governments, who have tried without success to revoke the bill. It is further important to understand that the government has the full power to change park boundaries to accommodate power projects; there is no guarantee that park boundaries could not be adjusted for energy projects.

With regard to climate change, we would like to comment on the value of intact, undeveloped ecosystems as providers of ecosystem services. Severe concerns exist in the scientific community (several references can be provided upon request) that developing natural ecosystems for greenhouse gas emission-free power sources will significantly lower humanities adaptability to climate change, since these systems act as natural buffers for climate change effects. Most areas in BC where RoR projects are proposed are remote, often pristine, wilderness areas. Extensive linear developments such as roads and transmission lines (in the case of the Bute Inlet project 450 km of transmission lines and 280 km of roads with 200 stream crossings) need to be built, with many impacts including clearing large amounts of forested areas, exposing forest soil to the sun, which results in large scale CO_2 releases. In this context, we would like to point out that most currently proposed projects are clusters of many small projects. The potential impacts of such developments are extremely difficult to predict and assess since the scientific community does not understand these complex systems well enough.

We hope that the State of California will not support further destruction of intact ecosystems. Benefiting from controversial energy imports while exporting the environmental risks and damages will negatively impact California’s track record of leading environmental policy. Please do not hesitate to contact us (info@bc-creeks.org) if you wish to obtain detailed information and references on any of the concerns mentioned above.

Sincerely,

Jan Dettmer, PhD
Director BC Creek Protection Society